

**Amendments to the Claims:** This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1-16. (Canceled)

1           17. (Currently Amended) A process for the manufacture of a membrane,  
2 comprising the steps of

- 3           (i) forming a porous substrate by a process comprising the steps of  
4               a. dispersing fibres in water to form a slurry;  
5               b. depositing the slurry formed in step (a) onto a mesh bed to form a  
6               fibre network;  
7               c. drying and compacting the fibre network formed in step (b); and  
8               d. applying before or after step (c), to the fibre network, ~~before or~~  
9               ~~after step (c)~~, a dispersion of a binder comprising both silica and a  
10              fluorinated polymer; and thereafter,  
11           (ii) impregnating the fibre matrix substrate with a polymeric material to  
12              produce a membrane.

1           18. (Previously Presented) A process according to claim 17, wherein step (ii)  
2 is carried out by nip roller coating of the substrate to fill it with a solution of ion-conducting  
3 polymeric material, and further compaction and drying of the membrane.

19-22. (Canceled)

1           23. (Previously Presented) A process according to claim 17, wherein the fibres  
2 are randomly oriented in said porous substrate.

1           24. (Currently Amended) A composite membrane according to claim 13,  
2 process according to claim 17, wherein the silica comprises a colloidal aqueous solution, or a  
3 silica powder dispersed in water.

4           25. (Currently Amended) A composite membrane according to claim 13,  
5 process according to claim 17, wherein the fluorinated hydrocarbon polymer comprises one or  
6 more non-ion-conducting polymer(s).

1           26. (Currently Amended) A composite membrane process according to claim  
2 25, wherein the non-ion-conducting polymer is selected from the group consisting of  
3 polytetrafluoroethylene (PTFE), fluorinated ethylene-propylene (FEP), tetrafluoroethylene-  
4 ethylene (ETFE) copolymers, poly(vinylfluoride) (PVF) and poly(vinylidenefluoride) (PVDF).

1           27. (Currently Amended) A composite membrane according to claim 13  
2 process according to claim 17, wherein the silica comprises a colloidal silica and the polymer  
3 comprises PTFE.

1           28. (Currently Amended) A composite membrane according to claim 13,  
2 process according to claim 17, wherein the ratio of silica to polymer is in the range of from  
3 95:5% to 5:95% based on weight/weight solid materials in the binder mixture.

1           29. (Currently Amended) A process composite membrane according to claim  
2 28, wherein the ratio of silica to polymer is in the range of from 70:30% to 30:70% based on  
3 weight/weight solid materials in the binder mixture.

1           30. (Currently Amended) A composite membrane process according to claim  
2 29, wherein the ratio of silica to polymer is about 50:50% based on weight/weight solid  
3 materials in the binder mixture.

1           31. (Currently Amended) A composite membrane according to claim 13,  
2 process according to claim 17, wherein the mixed binder is in the form of a dilute aqueous  
3 dispersion.

1               32. (Currently Amended) A ~~composite membrane process~~ according to claim  
2 31, wherein the dilute aqueous dispersion has about 10% weight solids in the aqueous solution.

1               33. (Currently Amended) A ~~composite membrane according to claim 13,~~  
2 ~~process according to claim 17,~~ wherein the fibres comprise at least one glass or silica.

1               34. (Currently Amended) A ~~composite membrane according to claim 13,~~  
2 ~~process according to claim 17,~~ wherein the fibres have a diameter in the range of from 0.1 $\mu$ m to  
3 50 $\mu$ m.